

Attorney Docket No.: 2002B133/2

IN THE CLAIMS:

Please cancel claim 10 and amend the claims as follows:

1. (Currently amended) A method of forming polyolefins, comprising:
mixing in a first vessel a catalyst slurry comprising a supported metallocene catalyst and a first oil, wherein the first vessel includes a housing having an upper portion and a lower portion, the lower portion disposed proximate to a catalyst slurry outlet and having a proximal end nearest a catalyst slurry inlet and a distal end nearest the catalyst slurry outlet, the proximal end having a circumference that is greater than a circumference of the distal end;
providing a transport medium comprising a second oil;
combining the transport medium and the catalyst slurry to form a catalyst mixture;
introducing the catalyst mixture to a polymerization reactor; and
contacting olefin monomers with the catalyst mixture to polymerize the olefin monomers and form polyolefins.
2. (Previously presented) The method of claim 1, wherein the catalyst slurry is mixed in the first vessel to maintain the metallocene catalyst suspended in the first oil.
3. (Cancelled)
4. (Previously presented) The method of claim 1, wherein the catalyst slurry is passed from the first vessel to a second vessel prior to combining the transport medium and the catalyst slurry, the second vessel having a substantially conical portion and a volume that is smaller than the volume of the first vessel, the method further comprising passing the catalyst mixture through at least one meter configured to measure a catalyst addition rate.
5. (Previously presented) The method of claim 1, further comprising monitoring a catalyst addition rate, the monitoring a catalyst addition rate including disposing the catalyst slurry in a second vessel having a catalyst slurry inlet and a catalyst slurry outlet and measuring the level of catalyst slurry within the second vessel.
6. (Currently amended) The method of claim 1, wherein the supported metallocene catalyst comprises 25 wt% or less of the catalyst slurry mixture.

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7. (Currently amended) The method of claim 1, wherein the supported metallocene catalyst has an activity of 3500 gPP/(gCat*hr) or more.
8. (Original) The method of claim 1, wherein the first oil and the second oil comprise mineral oil.
9. (Original) The method of claim 1, wherein the first oil and the second oil each have a kinematic viscosity of from 0.63 centistokes to 200 centistokes at 40°C.
10. (Canceled)
11. (Previously presented) The method of claim 1, wherein the second oil comprises 10 wt% or more of the combined catalyst mixture.
12. (Original) The method of claim 1, wherein the catalyst slurry comprises from 25 wt% to 5 wt% metallocene catalyst and from 75 wt% to 95 wt% first oil.
13. (Original) The method of claim 1, wherein the transport medium comprises 85 wt% or more second oil.
14. (Original) The method of claim 1, wherein the transport medium comprises 95 wt% or more second oil.
15. (Original) The method of claim 1, wherein the catalyst mixture comprises from 20 wt% to 80 wt% catalyst slurry and from 80 wt% to 20 wt% transport medium.
16. (Original) The method of claim 1, wherein combining the transport medium and the catalyst slurry to form a catalyst mixture provides a catalyst mixture with a lower viscosity than the viscosity of the catalyst slurry.
17. (Original) The method of claim 1, wherein the olefin monomers comprise propylene.
18. (Currently amended) A method of forming polypropylene, comprising:
providing a catalyst slurry consisting essentially of a supported metallocene catalyst and a first mineral oil having a kinematic viscosity of from about 0.63 centistokes to 200 centistokes at 40°C;

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mixing the catalyst slurry in a first vessel, the first vessel comprising a housing having an upper portion and a lower portion, the lower portion disposed proximate to a catalyst slurry outlet and having a proximal end nearest a catalyst slurry inlet and a distal end nearest the catalyst slurry outlet, the proximal end having a circumference that is greater than a circumference of the distal end;

providing a transport medium consisting essentially of a second mineral oil;

combining the transport medium and the catalyst slurry to form a catalyst mixture;

introducing the catalyst mixture to a polymerization reactor; and

contacting propylene monomers with the catalyst mixture to polymerize the propylene monomers and form polypropylene.

19. (Previously presented) The method of claim 18, wherein the catalyst mixture comprises from 10 wt% to 90wt % catalyst slurry and from 90 wt% to 10 wt% transport medium.
20. (Original) The method of claim 18, wherein the catalyst mixture comprises from 20 wt% to 80 wt% catalyst slurry and from 80 wt% to 20 wt% transport medium.
21. (Previously presented) A method of forming polyolefins, comprising:

mixing in a first vessel a catalyst slurry comprising a metallocene catalyst and a first oil;

passing the catalyst slurry from the first vessel to a second vessel, the second vessel having a substantially conical portion and a volume that is smaller than the volume of the first vessel;

providing a transport medium comprising a second oil;

combining the transport medium and the catalyst slurry to form a catalyst mixture;

passing the catalyst mixture through at least one meter configured to measure a catalyst addition rate;

introducing the catalyst mixture to a polymerization reactor; and

contacting olefin monomers with the catalyst mixture to polymerize the olefin monomers and form polyolefins.
22. (Previously presented) The method of claim 21, wherein the catalyst slurry is mixed in the first vessel to maintain the metallocene catalyst suspended in the first oil.
23. (Previously presented) The method of claim 21, further comprising measuring the level of catalyst slurry within the second vessel.

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24. (Previously presented) The method of claim 21, wherein the metallocene catalyst comprises 25 wt% or less of the catalyst slurry mixture.
25. (Previously presented) The method of claim 21, wherein the catalyst has an activity of 3500 gPP/(gCat*hr) or more.
26. (Previously presented) The method of claim 21, wherein the first oil and the second oil comprise mineral oil.
27. (Previously presented) The method of claim 21, wherein the first oil and the second oil each have a kinematic viscosity of from 0.63 centistokes to 200 centistokes at 40°C.
28. (Previously presented) The method of claim 21, wherein the catalyst is a supported metallocene catalyst.
29. (Previously presented) The method of claim 21, wherein the second oil comprises 10 wt% or more of the combined catalyst mixture.
30. (Previously presented) The method of claim 21, wherein the catalyst slurry comprises from 25 wt% to 5 wt% metallocene catalyst and from 75 wt% to 95 wt% first oil.
31. (Previously presented) The method of claim 21, wherein the transport medium comprises 85 wt% or more second oil.
32. (Previously presented) The method of claim 21, wherein the transport medium comprises 95 wt% or more second oil.
33. (Previously presented) The method of claim 21, wherein the catalyst mixture comprises from 20 wt% to 80 wt% catalyst slurry and from 80 wt% to 20 wt% transport medium.
34. (Previously presented) The method of claim 21, wherein combining the transport medium and the catalyst slurry to form a catalyst mixture provides a catalyst mixture with a lower viscosity than the viscosity of the catalyst slurry.
35. (Previously presented) The method of claim 21, wherein the olefin monomers comprise propylene.

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36. (Previously presented) The method of claim 21, wherein the catalyst mixture comprises from 10 wt% to 90wt % catalyst slurry and from 90 wt% to 10 wt% transport medium.
37. (Currently amended) A method of forming polyolefins, comprising:
mixing in a first vessel a catalyst slurry comprising a metallocene catalyst and a first oil;
passing the catalyst slurry from the first vessel to a second vessel having a catalyst slurry inlet and a catalyst slurry outlet, the second vessel having a substantially conical portion;
monitoring a catalyst addition rate by measuring the level of catalyst slurry within the second vessel;
providing a transport medium comprising a second oil;
combining the transport medium and the catalyst slurry to form a catalyst mixture;
introducing the catalyst mixture to a polymerization reactor; and
contacting olefin monomers with the catalyst mixture to polymerize the olefin monomers and form polyolefins.
38. (Previously presented) The method of claim 37, wherein the catalyst slurry is mixed in the first vessel to maintain the metallocene catalyst suspended in the first oil.
39. (Currently amended) The method of claim 37, wherein the catalyst slurry is passed from the first vessel to the second vessel prior to combining the transport medium and the catalyst slurry, ~~the second vessel having a substantially conical portion and~~ a volume that is smaller than the volume of the first vessel, the method further comprising passing the catalyst mixture through at least one meter configured to measure a catalyst addition rate.
40. (Previously presented) The method of claim 37, wherein the metallocene catalyst comprises 25 wt% or less of the catalyst slurry mixture.
41. (Previously presented) The method of claim 37, wherein the first oil and the second oil each have a kinematic viscosity of from 0.63 centistokes to 200 centistokes at 40°C.
42. (Currently amended) The method of claim 37, wherein the metallocene catalyst is ~~supported metallocene catalyst~~ [[a]].
43. (Previously presented) The method of claim 37, wherein the second oil comprises 10 wt% or more of the combined catalyst mixture.

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44. (Previously presented) The method of claim 37, wherein the catalyst slurry comprises from 25 wt% to 5 wt% metallocene catalyst and from 75 wt% to 95 wt% first oil.
45. (Previously presented) The method of claim 37, wherein the transport medium comprises 85 wt% or more second oil.
46. (Previously presented) The method of claim 37, wherein the transport medium comprises 95 wt% or more second oil.
47. (Previously presented) The method of claim 37, wherein the catalyst mixture comprises from 20 wt% to 80 wt% catalyst slurry and from 80 wt% to 20 wt% transport medium.
48. (Previously presented) The method of claim 37, wherein combining the transport medium and the catalyst slurry to form a catalyst mixture provides a catalyst mixture with a lower viscosity than the viscosity of the catalyst slurry.
49. (Previously presented) The method of claim 37, wherein the olefin monomers comprise propylene.
50. (Previously presented) The method of claim 37, wherein the catalyst mixture comprises from 10 wt% to 90wt % catalyst slurry and from 90 wt% to 10 wt% transport medium.
51. (Currently amended) The method of claim 37, wherein the metallocene catalyst has an activity of 3500 gPP/(gCat*hr) or more.
52. (Previously presented) The method of claim 37, wherein the first oil and the second oil comprise mineral oil.

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